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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,719	12/05/2003	John Kavanaugh	2304.JKAV.NP	1733
27472	7590	07/13/2005	EXAMINER	
RANDALL B. BATEMAN BATEMAN IP LAW GROUP 8 EAST BROADWAY, SUITE 550 PO BOX 1319 SALT LAKE CITY, UT 84110			WARREN, DAVID S	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

**Office Action Summary**

Application No.

10/728,719

Applicant(s)

KAVANAUGH, JOHN

Examiner

David S. Warren

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Regarding claim 16, the phrase "and/or" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

3. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "head" in claims 1 - 43 is used by the claim to mean both the taut vibrating membrane stretched over the banjo's rim as well as the electromagnetic pole pieces (as in claim 3), while the accepted meaning is, when used in conjunction with banjos, is the taut vibrating membrane. The term is indefinite because the specification does not clearly redefine the term.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 5 - 9, 13 - 16, 23 - 34, and 36 - 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Eps (1,364,466) in view of Ikuma (4,501,186). Regarding independent claims 1, 8, 23, 34 and 43, Van Eps discloses the use of a banjo having a head (2) having an opening (15) positioned over a means (16) to increase the volume. Means (18) provide for adjustment. Van Eps does not disclose the use of a pickup system extending through the head nor the use of a preamplifier. Ikuma discloses the use of a pickup system extending through the sound hole of an acoustic guitar (fig. 5) and the use of a preamplifier (22). It would have been obvious to one of ordinary skill in the art to combine the teachings of Van Eps and Ikuma to obtain a banjo, having a pickup extending through the head. The motivation for making this combination would be to provide a banjo having a vibrating membrane wherein a pickup could be positioned in such a way as to be closer to the strings thus providing a "hotter" pickup signal. Regarding claims 2 and 9, Ikuma discloses a hole wherein the pickup is "received." Regarding claims 5 and 13, stabilizer bars are shown in Ikuma as element 11 (furthermore, given the nature of the banjo head, one of ordinary skill would think to mount the pickup on elements 9, 12, or 13 of Van Eps). Regarding claims 6 and 14, see element 25 of Ikuma. Regarding claim 7, elements 18 of Ikuma are adjustable (col. 3, lines 20 - 24). Regarding claims 15, 16 and 24, the use of humbucking pickups is notoriously old and well-known to reduce noise from external sources of electromagnetic radiation, one of ordinary skill would think to use humbucking pickups as per the suggestion of Ikuma (col. 1, lines 47 - 49):

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The electromagnetic [sic] of the foregoing type is of a low impedance and has an advantage in that it is immune to external noise.

In figures 11 and 12, Ikuma shows that string vibration is sensed by both a single coil and double coil pickup (although Ikuma is silent as to humbucking per se). Regarding claims 25 – 29, 41, and 42, the mounting structure and method (i.e., nuts, bolts, springs, clips, etc.) are deemed to be within the scope of one of ordinary skill. Regarding claims 21, 30, 33, 36 and 39, Ikuma discloses the use of a preamp (22) having both balance and volume control (element 129, fig. 9; element 29, fig. 4). Regarding claims 22, 31, 32 and 38, Ikuma discloses two pickups, each having a portion within the instrument (21, 17, fig. 4). Regarding claim 35, placing the preamp in a box is deemed to be mere design choice. Regarding claims 37 and 40, by balancing between each pickup, Ikuma presumably would alter the tone.

6. Claims 3, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Eps in view of Ikuma and Nyack, Jr. et al. (4,602,547). The teachings of Ikuma and Van Eps have been discussed supra. Neither Van Eps nor Ikuma disclose the use of a plural holes to accommodate plural “heads” (i.e., cores or pole pieces). Nyack discloses a planar surface (24) having plural holes to accommodate plural “heads” (compare figs. 4 and 5). It would have been obvious to one of ordinary skill in the art to combine the teachings of Ikuma, Van Eps, and Nyack to obtain a pickup system for a banjo wherein plural cores are exposed to the strings via plural holes. The

motivation for making this combination is to maintain a larger surface area of the banjo head to prevent any degradation of the acoustic, unamplified tone of the instrument.

7. Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Eps in view of Ikuma and Cox (4,213,368). The teachings of Ikuma and Van Eps are discussed supra. Neither Ikuma nor Van Eps disclose the use of a reinforcing layer disposed about the hole. Cox discloses a hole in a banjo head having a reinforcing layer (4' and 4'', fig. 2; col. 3, lines 1 – 3). It would have been obvious to one of ordinary skill in the art to combine the teachings of Ikuma, Van Eps, and Nyack to obtain a banjo having a reinforced hole. The motivation for making this combination is that by reinforcing the hole, tearing and splitting are avoided.

### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Eps. As discussed supra, Van Eps discloses the use of a planar surface (2) positioned between the strings and body of a banjo, having a hole (15) formed in the planar portion. Regarding claim 20, the opening of the hole in the Van Eps teachings is

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large enough to receive a pickup. (The Examiner interprets this claim wherein only the size of the hole is claimed, it does not claim that a pickup is actually received therein).

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Eps in view of Ikuma and Nyack, Jr. et al. (4,602,547). The teachings of Ikuma and Van Eps have been discussed supra. Neither Van Eps nor Ikuma disclose the use of a plural holes to accommodate plural "heads" (i.e., cores or pole pieces). Nyack discloses a planar surface (24) having plural holes to accommodate plural "heads" (compare figs. 4 and 5). It would have been obvious to one of ordinary skill in the art to combine the teachings of Ikuma, Van Eps, and Nyack to obtain a pickup system for a banjo wherein plural cores are exposed to the strings via plural holes. The motivation for making this combination is to maintain a larger surface area of the banjo head to prevent any degradation of the acoustic, unamplified tone of the instrument.

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Eps in view of Ikuma and Cox (4,213,368). The teachings of Ikuma and Van Eps are discussed supra. Neither Ikuma nor Van Eps disclose the use of a reinforcing layer disposed about the hole. Cox discloses a hole in a banjo head having a reinforcing layer (4' and 4'', fig. 2; col. 3, lines 1 – 3). It would have been obvious to one of ordinary skill in the art to combine the teachings of Ikuma, Van Eps, and Nyack to obtain a banjo having a reinforced hole. The motivation for making this combination is that by reinforcing the hole, tearing and splitting are avoided.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Warren whose telephone number is 571-272-2076. The examiner can normally be reached on M-F, 9:30 A.M. to 6:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on 571-272-2800 ext 37. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dsw

  
MARLON T. FLETCHER  
PRIMARY EXAMINER